

AD-A087 292

PURDUE UNIV LAFAYETTE IN DEPT OF PSYCHOLOGICAL SCIENCES F/6 5/10
BENEFITS OF SUFFERING: COMMUNICATOR SUFFERING, BENEFITING, AND --ETC(U)
JUL 80 P A KNIGHT, H M WEISS N00014-78-C-0609

UNCLASSIFIED

NL

1 of 1
Page 1



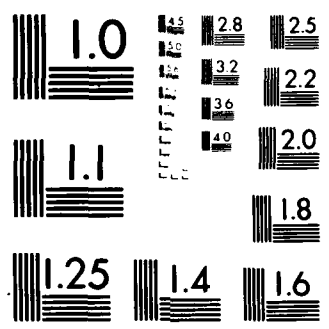
END

DATE

FILED

9-80

DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

ADA 087292

DDC FILE COPY

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

LEVEL II

12

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS
BEFORE COMPLETING FORM

1. REPORT NUMBER

16

2. GOVT ACCESSION NO.

AD-A087292

3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle)

Benefits of Suffering: Communicator Suffering,
Benefiting, and Influence.

5. TYPE OF REPORT & PERIOD COVERED

Interim rept. no. 6

6. PERFORMING ORG. REPORT NUMBER

7. AUTHOR(s)

Patrick A. Knight and
Howard M. Weiss

8. CONTRACT OR GRANT NUMBER(s)

N00014-78-C-0609

9. PERFORMING ORGANIZATION NAME AND ADDRESS
Department of Psychological Sciences
Purdue University
W. Lafayette, IN 4790710. PROGRAM ELEMENT, PROJECT, TASK
AREA & WORK UNIT NUMBERS

NR 170-876

11. CONTROLLING OFFICE NAME AND ADDRESS

Organizational Effectiveness Research Programs,
Office of Naval Research, Arlington, VA 22217

12. REPORT DATE

July 1980

13. NUMBER OF PAGES

29

14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)

15. SECURITY CLASS. (of this report)

15a. DECLASSIFICATION/DOWNGRADING
SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited.
Reproduction in whole or in part is permitted for any purpose of the
U.S. Government.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

DTIC
ELECTE

JUL 30 1980

E

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Suffering, benefiting, influence, attributions, leadership, perceptions.

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Two studies were conducted to examine the effects of an actor's suffering or benefiting upon observers' perceptions of the actor's honesty, independence and bias, their attributions for the actor's expressed opinions, and the actor's influence. In both studies, subjects read bogus newsmagazine articles about an individual who had taken a public stand on an issue and had either suffered, benefited or received no outcome as a consequence. The results of both studies showed that the suffering actor was rated as more honest, more independent, and less biased by subjects. The subjects also made more dispositional attributions

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 68 IS OBSOLETE

S/N 0102-LF-014-6601

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

408332

80 7 21 03 1

for the suffering actor's expressed opinion and more situational attributions for the benefiting actor's opinion. Additionally, results of the second study showed that the suffering representative was more influential than the benefiting representative. Results are discussed in terms of their implications for influence and leadership in various settings, and their relationships to other research findings on attribution and persuasion.

Benefits of Suffering: Communicator
Suffering, Benefiting, and Influence

Patrick A. Knight and Howard M. Weiss
Purdue University

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist.	Avail and/or special
A	

Prepared for
Organizational Research Effectiveness Program
Office of Naval Research

Contract N00014-78-C-0609
N R 170-876

Approved for public release; distribution unlimited
Reproduction in whole or in part is permitted for
any purpose of the United States Government.

Abstract

Two studies were conducted to examine the effects of an actor's suffering or benefiting upon observers' perceptions of the actor's honesty, independence and bias, their attributions for the actor's expressed opinions, and the actor's influence. In both studies, subjects read bogus newsmagazine articles about an individual who had taken a public stand on an issue and had either suffered, benefited or received no outcome as a consequence. The results of both studies showed that the suffering actor was rated as more honest, more independent, and less biased by subjects. The subjects also made more dispositional attributions for the suffering actor's expressed opinion and more situational attributions for the benefiting actor's opinion. Additionally, results of the second study showed that the suffering representative was more influential than the benefiting representative. Results are discussed in terms of their implications for influence and leadership in various settings, and their relationships to other research findings on attribution and persuasion.

Benefits of Suffering: Communicator
Suffering, Benefiting, and Influence

Casual observation of the lives of great leaders suggests an interesting common experience, a period of suffering resulting from the expression of their beliefs. The sacrifice and suffering of religious leaders such as Jesus, Moses or Joseph Smith is, of course, well known, and similar experiences among certain political figures such as Ghandi or Mao have become almost legendary. Of particular interest is that this suffering has generally preceded the leader's period of greatest influence. Jesus, for example, had only a handful of followers until after his death. It was subsequent to the crucifixion that the Christian church developed, largely around this act of sacrifice. In the political realm, Hitler, Ghandi and Lenin all spent time in jail and/or exile because of their beliefs before gaining widespread acceptance and influence. Burns (1978), in his treatise on leadership, has noted the frequency of suffering and sacrifices found among leaders. His analysis of the lives of several great historical leaders shows that a willingness to make sacrifices for strongly held ideas or moral convictions has been a common characteristic of influential people across various cultures and periods of history. He also points out that the suffering of great leaders has often continued throughout their lives.

Is the suffering common among great leaders a coincidence, or is suffering relevant to the leadership process itself, somehow enhancing leadership qualities? Merton (1946) first discussed a possible relationship between suffering and influence in his analysis of peoples' reactions to a 1943 war bond drive. Throughout an 18 hour radio marathon Kate Smith urged listeners to purchase war bonds. Merton's analysis of a survey of listeners

showed that they believed Kate Smith was making a significant sacrifice of time and effort, and as a result of having broadcast for the full 18 hours that she was actually suffering for the war bond cause. Merton speculated that these perceptions of sacrifice may have been partly responsible for Smith's success at selling bonds by influencing listeners' beliefs about her sincerity.

Interestingly, it seems that leaders themselves have often believed that people respond positively to suffering and have frequently attempted to use their own sacrifices to political advantage. Barber (1977), discussing the influence of U.S. presidents, gives several examples of how national leaders have emphasized their own personal sacrifice to gain acceptance for their policies. Similarly, revolutionary leaders such as Mao or Ghandi have often used public displays of sacrifice or suffering to demonstrate their own dedication and gain support for their movements.

Obviously, observations of frequent suffering among great leaders is not, in itself, evidence that such experiences are more characteristic of individuals with widespread influence or that these experiences somehow enhance leadership qualities. Yet the frequent occurrence of suffering and sacrifice in the lives of great leaders and the apparent belief among such leaders in the utility of suffering suggests that the possible effects of suffering on influence and the process by which such effects might occur deserve further study. The research reported here examines these issues.

Attribution theory provides a potentially useful explanatory framework for understanding the way people might react to individuals who suffer as a result of the open expression of their beliefs. Of particular relevance to any suffering effects are Kelley's (1973) principles of discounting and augmentation. According to Kelley, individuals exposed to others' opinions

engage in a causal analysis of the belief statements. The more external or situational explanations which are available for an actor's belief statements, the less likely an observer will be to seek personal or dispositional explanations for that statement. That is, if compelling external explanations exist for an individual's attitude expression, observers will be less likely to regard the expressed opinion as a true statement of the actor's beliefs. Under such conditions dispositional causes will be discounted. If, however, the statements are made in spite of the existence of external factors which would normally inhibit the expression of the belief, personal or dispositional explanations will be augmented and observers will be more likely to regard the statement as a true, honest expression of the actor's belief.

This attributional analysis provides an explanation of how observers might perceive and react to an individual who suffers for his or her beliefs. Suffering is likely to be regarded by observers as a factor which would inhibit the open expression of one's beliefs. Therefore, when observers view an actor expressing his beliefs in spite of negative consequence, dispositional attributions for those belief statements are augmented. As a result, suffering actors will be perceived as more honest and sincere in their beliefs and those belief statements will be seen as less a function of external factors. These perceptions of the communicator's honesty and integrity should in turn have a positive effect on his or her influence.

This discussion of the effects of suffering upon observers' attributions and perceptions raises the issue of the possible effects of outcomes other than suffering. The most obvious of these is simply the converse of suffering, i.e., benefiting as a consequence of belief expression. It has been suggested here that suffering should result in the augmentation of

dispositional attributions with accompanying perceptions of honesty and sincerity on the part of the observers. However, if the actor benefits from his or her actions, an alternative explanation apart from the actor's true beliefs now exists for the belief statements. Dispositional causes for the behavior should therefore be discounted, external causes should be augmented and the actor will more likely be seen as under the influence of these external factors (i.e., personal benefits) than the actor who has suffered. Consequently, a benefiting actor will be perceived as more biased, and less honest and sincere, than will a suffering actor.

As with the suffering actor, these attributions and perceptions should affect the actor's influence. In this case, the discounting of the actor's honesty and sincerity should in turn have a negative effect on his or her influence.

In summary, it is proposed that observers will perceive a suffering actor as more honest, more independent of external pressures, and less biased than a benefiting actor. They will also perceive more dispositional or internal causes for a suffering actor's behavior and more situational or external causes for the behavior of a benefiting actor. These perceptions should in turn result in the suffering actor having more influence than the benefiting actor over the attitudes of observers.

Two studies are described which attempt to examine the effects of communicator suffering and benefiting on attributions, perceptions of the communicator, and influence.

STUDY 1

Method

Subjects

One hundred and sixty introductory psychology students at Purdue

University participated in the study in partial fulfillment of course requirements.

Procedure

Subjects were run in groups of approximately 30 each. They were told they were participating in a study examining peoples' reactions to, and use of, what they read in newspapers and newsmagazines. They would read an article which had appeared in a recent issue of a weekly newsmagazine and would then be asked for their reactions to what they had read. Three versions of a newsmagazine article (prepared specifically for the research--see "Stimulus Materials" below) presenting a communicator's opinions on an issue and his history of suffering or benefiting were randomly distributed to the subjects. Subjects read the article and then completed a questionnaire measuring their perceptions of the communicator, their causal attributions for the communicator's statements, their own attitudes toward the issue discussed in the article and items designed to assess the effectiveness of the manipulations. The subjects were then debriefed and dismissed.

Stimulus Materials

Three versions of a newsmagazine article on the civil war in Zimbabwe-Rhodesia were prepared. At the time the study was conducted (Fall, 1979) the Zimbabwe-Rhodesian civil war was in the news daily. The war was chosen as the topic of the newsmagazine articles because it was an issue that subjects would likely be aware of, but on which they would probably not already hold strong opinions. To assure that subjects would not question the authenticity of the "articles", they were typeset and then duplicated to look like simple photocopies of an article which had appeared in a national weekly newsmagazine. The three articles began with identical background information about the war between the black majority government

of then-Prime Minister Abel Muzorewa and the rebels of the Patriotic Front.

This background information was an accurate account of the political situation in Zimbabwe-Rhodesia, describing the various factions in the country and the issues which had led to war. This section of the "article" was based on reports appearing in Time, Newsweek, and U.S. News and World Report over the previous year. The articles went on to say that a major objective of the Muzorewa government was to gain diplomatic recognition from the United States, with subsequent lifting of economic sanctions then in force against Zimbabwe-Rhodesia. To this end, the Muzorewa government had sent a representative, one Stanlake Samkanga, to the U.S. to try to persuade the Congress and the American public that they should support Muzorewa.

The articles next contained information about the consequences which had accrued to Samkanga in his own country from openly supporting the Muzorewa government. Specifically, in the suffering condition the article continued with the following passage:

For Samkanga, as for other black citizens, openly supporting the new government has not been easy. Threats against his life and the life of his family have been frequent and one of Samkanga's sons has been left permanently disabled as a result of a severe beating at the hands of local supporters of the Patriotic Front. Demonstrators outside his home have thrown rocks through his windows leaving no doubt that it is his support for the new government which has brought on the attacks. Maybe more severe than the physical harrassment he and his family have endured is the breakdown of friendships and personal relationships that have resulted from his open expression of his opinion. In a country deeply divided, some previously close friends can become very distant very quickly.

In the benefiting condition, the following passage appeared instead:

Samkanga had been an early, vocal supporter of the new constitution and the Muzorewa regime and this active support has lead to his obtaining a very desirable appointment in the new government. Although terrorist attacks by the Patriotic Front are common in the strife torn country, so far the police have been able to provide adequate protection for government officials like Samkanga. Support for the new government has also opened up new opportunities for Samkanga within the previously whites only business community, opportunities which have substantially increased the standard of living of the Samkanga family. The family, used to living in an all black government owned project, now resides in a large house in the middle of Salisbury.

The third article was a "neutral" article, containing no background information about Samkanga's suffering or benefiting. Finally, all three versions ended with identical passages establishing Samkanga's desire for U.S. recognition, his belief in the legitimacy of the Muzorewa government, and his criticisms of the Patriotic Front.

Dependent Variables

Perceptions of the Representative. Fifteen seven-point bipolar adjective scales were used to measure perceptions of Stanlake Samkanga. A principle components analysis with varimax rotation of the subjects' responses was used to reduce these to three summary variables: Honesty (positive poles of honest, sincere, trustworthy and principled), Bias (negative poles of biased, manipulative, selfish and opportunistic), and Independence (positive poles of independent, committed, unafraid and consistent). Scores on the summary variables were formed by averaging the individual items.

Attributions. Subjects were asked to indicate, on seven-point Likert scales, the extent to which each of four potential causes were the basis of

Samkanga's support of the Muzorewa government. Two of these four items represented dispositional causes (Samkanga's true beliefs about the Muzorewa government; his beliefs about the benefits which the government would provide for Zimbabweans), while the other two were situational causes (pressures on Samkanga from the Muzorewa government; potential personal benefits for Samkanga). These four items were averaged to form a dispositional versus situational attribution measure.

Attitudes. Five seven-point Likert items measuring the subjects' attitudes about the legitimacy of the Muzorewa government and U.S. recognition of that government (e.g. "The United States should formally recognize the new Muzorewa government of Zimbabwe-Rhodesia". "The United States should lift its economic sanctions against the government of Zimbabwe-Rhodesia") were averaged to form the attitude measure.

Results

Manipulation Checks

Subjects used a seven point Likert type scale to rate the extent to which Samkanga had suffered and benefited. As expected, the suffering representative was perceived as having suffered more than either the benefiting or the control group representatives (\bar{x} 's = 6.02, 3.44, 3.78, respectively: $F(2,157) = 28.24, p < .001$). Samkanga was in turn perceived as having benefited more in the benefiting condition than in the suffering or control conditions (\bar{x} 's = 5.56, 3.52, 4.74, respectively: $F(2,157) = 53.63, p < .001$).

Perceptions of the Representative

Means on the three summary variables measuring perceptions of Samkanga's honesty, bias and independence are given in Table 1. It was hypothesized that the subjects would describe Samkanga in more favorable terms when he had suffered than when he had benefited. This hypothesis was strongly supported.

As shown in the table, the overall F-ratios for these variables were all highly significant (p 's $< .001$). In addition, planned contrasts showed that the suffering representative was seen as more honest and more independent than the other representatives (p 's $< .001$), while the benefiting representative was described as being more biased than the suffering or control representatives ($p < .05$).

Insert Table 1 about here

Attributions

It was expected that subjects who believed Samkanga had suffered would make more dispositional attributions for his behavior, while subjects who believed he had benefited would make more situational attributions. As shown in Table 1, this prediction was also supported. The overall F was significant ($p < .001$), and planned contrasts showed that the suffering Samkanga's support for the Muzorewa government was attributed significantly more to internal causes than was the support of the benefiting or neutral Samkangas ($p < .001$).

Influence of the Representative

Finally, it was expected that these differences in perceptions of Samkanga and attributions for his behavior would translate into greater influence in the suffering condition than in the benefiting condition. This would result in more favorable attitudes toward the Muzorewa government among subjects who read about the suffering Samkanga than among those who read about the benefiting Samkanga. However, as can be seen in Table 1, although the means are in the expected direction, this hypothesis was not supported. Attitudes toward the Muzorewa government were not affected by the suffering or benefiting of the representative. Correlations between

the subjects' attitudes and the Honesty ($r = .17$, $p < .05$), Bias ($r = .18$, $p < .05$), Independence ($r = .18$, $p < .05$), and attribution ($r = -.15$, $p < .05$) measures were all significant, although fairly low. These low but significant correlations support the relevance of these characteristics to an actor's influence.

Discussion - Study 1

The results of this study provide evidence for the effect of suffering and benefiting on reactions to and perceptions of actors, but do not support the effects on influence which were expected to accompany those perceptions.

It was hypothesized that an actor who had suffered for his or her beliefs would be perceived as more honest, more independent, and less biased than an actor who had benefited from his or her behavior. It was also expected that subjects would make more dispositional attributions for the suffering individual's belief statements than for benefiting individual's statements. These hypotheses were strongly supported. It appears that the consequences of Samkanga's support for his government played an important part in determining how the subjects felt about him.

Given the significant effect that suffering had on perceptions of Samkanga and attributions for his belief statements, the absence of an effect on influence is surprising. Research has shown that communicator characteristics such as honesty and expertise can have positive effects on communication effectiveness (e.g., Hovland and Weiss, 1952; Kelman and Hovland, 1953). However, it has also been shown that communicator variables often interact with audience and message characteristics in determining communication effectiveness (e.g., Fishbein and Ajzen, 1973; Eagly and Himmelfarb, 1978; Jaccard, in press) and this may help explain the results obtained here. Analysis of the stimulus material used in Study 1 suggested

that possible deficiencies in the way Samkanga's message was presented to the subjects may have contributed to the absence of an effect on influence. Specifically, Samkanga's arguments were presented briefly, without extensive argument, and integrated within the news article. While Samkanga's suffering or benefiting was salient, his message was less so. It is possible that subjects were not able to fully understand or integrate Samkanga's message, precluding any effect on their attitudes. As a result, it was felt that before dismissing the effects of suffering and benefiting on influence more research with a more salient message was necessary.

An additional, unanticipated, problem of interpretation of the results of Study 1 concerned differences in the perceived violence of the Patriotic Front rebels across the three conditions. Although an attempt was made to equate the level of violence in the articles, analysis of a question asking the subjects to rate the violence of the rebels showed that the rebels were perceived as significantly more violent in the suffering than in the benefiting or control conditions ($F(2,157) = 4.59, p < .05$). As a consequence, obtained differences in perceptions and attitudes in favor of the suffering Samkanga may have been due to a negative reaction to the more violent rebels in the suffering condition, rather than because of Samkanga's suffering.

In order to address these issues raised by the results of Study 1, a second study was conducted. The purposes of Study 2 were threefold. First, it was intended to replicate the findings of Study 1 with regard to perceptions of Samkanga and attributions for his belief expression. Second, it was designed to better examine the effects of suffering and benefiting on influence with a clearer more direct message from Samkanga. Third, it was intended to better control for differences in perceived rebel violence across conditions so that such differences could not account for any observed

effects.

STUDY 2

Method

Subjects

One hundred and sixty eight introductory psychology students at Purdue University participated in the study in partial fulfillment of course requirements. Forty eight subjects participated in a pilot study assessing the effectiveness of the message presented in the stimulus materials, and the remaining 120 subjects participated in the main study.

Pilot Study

As discussed earlier, the failure to find differential influence in spite of significant differences in perceptions of Samkanga may have been due to the ineffectiveness of his message. To avoid this possibility in Study 2, a new version of the news article was prepared in which the views of Samkanga were presented in a detailed interview. In the interview, ostensibly given while Samkanga was visiting New York and meeting with U.S. officials, a correspondent from the magazine asked for Samkanga's opinions about the civil war and his reactions to statements made by critics of the Muzorewa government. The following is a brief portion of the interview:

Correspondent: What exactly are you trying to accomplish during your stay here?

Samkanga: What I am trying to accomplish can be simply stated. I am trying to convince the American people of the legitimacy of the new constitution and government of my country. I am trying to show that total white rule in Rhodesia has ended and that the Muzorewa government needs and deserves to be recognized by the United States as the legitimate representative of the Zimbabwean people.

It was felt that having Samkanga personally address the issues in this way would not only clarify his position, but also make his opinions more salient to the subjects.

To assess the effectiveness of the new message, two new versions of the news article used in Study 1 were prepared and typeset. These new versions began with the identical background information presented in the articles used in Study 1. In order to assess message effectiveness in the absence of outcome information no suffering or benefiting information was included in these articles. Instead, in both articles a brief statement describing Samkanga and his mission to the U.S. in support of the Muzorewa government immediately followed the background information. The only difference between the two articles used in this pilot study was that one (message condition) concluded with the interview described above which explicitly detailed Samkanga's position, while the other (no message condition) did not include the interview.

The two articles were randomly distributed to 48 introductory psychology students who read the article and completed the attitude scale used in Study 1. The mean attitude scores of the no message group (3.10) and the message group (3.91) were significantly different, with attitudes toward the Muzorewa government more favorable in the message condition ($t(47) = 2.79$ $p < .01$). This result indicates that the new interview successfully communicated Samkanga's position, and assured that any absence of an influence effect in Study 2 could not reasonably be attributed to message ineffectiveness.

Procedure

The procedure for Study 2 was identical to that used in Study 1 with the exception of changes in the stimulus materials to include the more explicit message and to equate perceptions of rebel violence.

Stimulus Materials

Based upon the results of the pilot study, three new versions of the newsmagazine article were prepared and typeset. These articles were identical to those used in Study 1 except for two changes. First, the interview with Samkanga (described above) which presented the more explicit message was added to the end of all three articles. Second, to equate perceptions of rebel violence across conditions, additional information about the violence of the Patriotic Front was added to the benefiting condition article immediately before the information about the positive consequences which had accrued to Samkanga. It was stressed that while Samkanga had not been a victim of rebel violence, other supporters of the Muzorewa government had been attacked by rebels.

Dependent Variables

Perceptions of the Actor. The Honesty, Independence and Bias scales used in Study 1 to measure perceptions of Samkanga were again used in Study 2.

Attributions. As in Study 1, subjects indicated on seven-point Likert scales the extent to which they attributed Samkanga's support of the Muzorewa government to dispositional causes (Samkanga's true beliefs about the government) or to situational causes (pressures on Samkanga from the government; potential personal benefits). Responses to these items were averaged to form the dispositional vs. situational index of attributions.

Attitudes. Response to the five items used in Study 1 were again averaged to assess subjects' attitude toward the Muzorewa government.

Results

Manipulation Checks

As in Study 1, subjects rated the extent to which Samkanga had suffered

and benefited using seven-point Likert scales. As was found in Study 1, Samkanga was seen as having suffered more in the suffering condition than in either the benefiting or control conditions (\bar{x} 's = 5.15, 3.02, 3.37, respectively; $F(2,117) = 20.99$, $p < .001$). Also, Samkanga was perceived as having benefited more in the benefiting condition than in the suffering condition, although not significantly more than in the control condition (\bar{x} 's = 5.40, 4.47, 5.15, respectively; $F(2,117) = 4.69$, $p < .05$). To check on the attempt to equate perceptions of Patriotic Front violence across conditions, subjects indicated how violent they believed the rebels were using a seven-point Likert scale. The attempt was apparently successful, as there were no significant differences between suffering, benefiting, and control group means (\bar{x} 's = 2.03, 2.12, 1.78, respectively; $F(2,117) = 1.04$, $p > .05$).

Perceptions of the Actor

Means on the summary variables of perceived representative characteristics are presented in Table 2. As can be seen in the table, all F-ratios are significant (p 's $< .05$), essentially replicating the results of Study 1. It was expected that the suffering Samkanga would be rated as more honest, more independent and less biased than the benefiting Samkanga, and these expectations are again supported. The means on all variables are in the expected order, and planned contrasts show that the benefiting and suffering means are significantly different on all three variables (p 's $< .01$). The only other significant mean difference is between the control and benefiting means on the Honesty measure ($p < .05$).

Insert Table 2 about here

Attributions

Table 2 contains the means on the attribution measures. It was expected that dispositional attributions would be made for the suffering representative's support of the Muzorewa government, and that situational attributions would be made for the benefiting representative's support. The overall F-ratio was significant ($p < .01$), supporting the hypothesis and again replicating the findings of Study 1. The means on the attribution measure are in the expected direction, and planned contrasts show that the suffering and benefiting means are significantly different (p 's $< .01$). The control group mean was not significantly different than the other two means.

Influence of the Actor

Means of the measure of subject attitudes toward the Muzorewa government are also presented in Table 2. It was expected that the suffering Samkanqa would be more influential than the benefiting Samkanqa, and that as a result attitudes toward the Muzorewa government would be more favorable in the suffering condition than in the benefiting condition. In contrast to the first study, the results of the analysis of variance in Study 2 strongly support this prediction ($p < .05$). Subjects who had read about a suffering representative had more favorable attitudes toward the Muzorewa government than did subjects who had read about a benefiting representative, indicating that the representative did indeed have greater influence when he had suffered. Planned contrasts showed that the difference between suffering and benefiting means was significant ($p < .01$). No other contrasts were significant. Also as in Study 1, the correlations between the attitude measure and the Honesty ($r = .46$, $p < .001$), Bias ($r = .47$, $p < .001$), Independence ($r = .37$, $p < .001$) and attribution measures ($r = -.45$, $p < .001$) were significant.

It should be noted, moreover, that these correlations are much stronger than in Study 1, apparently due to the more effective message.

Regression Analysis

We have suggested that observers' perceptions and attributions mediate the relationship between an actor's suffering or benefiting and his or her subsequent influence over the observers. Because in this study measures of the proposed mediating variables were made at the same time as measures of the subjects' attitudes, causal inferences cannot be made. However, the feasability of the proposed causal chain can be assessed by a hierarchical regression analysis. If perceptions and attributions do indeed mediate the suffering/benefiting—attitude relationship, entering them into a regression equation predicting attitudes from suffering and benefiting alone should result in a significant increase in R^2 . However, if the mediating variables are entered on the first step of the regression and the suffering and benefiting variable on the second step, there should be no significant increase in R^2 on the second step. If the proposed causal chain is not valid, the pattern of results described above should not occur. That is, perceptions and attributions should not improve prediction of attitudes over that of suffering and benefiting alone.

Two sets of regression analyses were conducted. One focused on the mediating influence of observer perceptions of honesty, independence and bias, while the other focused on the mediating influence of observer attributions. The results of these analyses strongly support the validity of the proposed causal chain. When the perception measures were added to the equation predicting attitudes from Samkanga's outcomes alone (suffering, benefiting or no outcomes, dummy coded), the increase in R^2 of .063 to .299

was highly significant ($F(3,114) = 12.79, p < .001$). When these variables were entered in the opposite order, however, the change in R^2 (from .284 to .299) was not significant ($F(2,114) = 1.22, p > .05$). Similarly, a significant increase in R^2 (.063 to .220) was obtained when the attribution measure was added to the regression equation predicting attitudes from outcomes ($F(1,116) = 23.35, p < .001$) while entering the equations in the opposite order resulted in no significant increase in R^2 (.206 to .220) on the second step ($F(2,116) = 1.04, p > .05$).

Discussion - Study 2

Study 2 was conducted both to replicate the findings of Study 1 regarding the effects of suffering and benefiting on perceptions of the communicator and attributions for his belief statements, and to further examine the effect of these outcomes on influence using a more explicit message than in Study 1.

Regarding the effects of suffering and benefiting on subjects' perceptions and attributions, the results of Study 2 paralleled those of Study 1. As in the first study, the suffering Samkanga was perceived as more honest, more independent, and less biased than the benefiting Samkanga. In addition, Samkanga's support of the Muzorewa government was attributed more to dispositional causes in the suffering condition than in the benefiting condition.

In Study 1, subjects' attitudes toward the Muzorewa government were not affected by Samkanga's suffering or benefiting. It was suggested that the failure to find any influence effect may have been due to the way in which Samkanga's message was presented. In Study 2, the stimulus materials were modified to contain a more explicit message. The effectiveness of this new message in the absence of communicator outcome information was demonstrated in

a pilot study. Results of Study 2 indicate that with the inclusion of the more explicit message, suffering and benefiting had their expected effect on communicator influence. Subjects' attitudes toward the Muzorewa government were significantly more favorable in the suffering condition than in the benefiting condition. In addition, the correlations between subjects' attitudes and their perceptions and attributions were much stronger than in Study 1, as would be expected with a more effective message. Thus, it seems that the addition of a more explicit message allowed the effect of the communicator's suffering or benefiting to emerge.

Finally, as discussed earlier, a potential alternative explanation for the results of Study 1 was raised by the finding that subjects in the suffering condition perceived the Patriotic Front rebels as more violent than did subjects in the benefiting condition. In Study 2 changes were made in the stimulus materials which effectively eliminated differences in perceived rebel violence across conditions. As such, any differences across conditions found in Study 2 could not be attributed to differences in subjects' perceptions of the violence of the rebels.

General Discussion

Taken together, these two studies provide strong support for the effects of a communicator's suffering and benefiting on perceptions of the communicator, attributions for the communicator's expressed opinions, and the communicator's persuasiveness. In both studies, subjects who read about a person who had suffered for his beliefs rated that person as more honest, more independent, and less biased than did subjects who read about a person who had benefited. In addition, subjects in the suffering condition attributed the communicator's statements to dispositional factors, while subjects in the benefiting condition attributed the statements to situational factors. Finally, at least in Study

2, the suffering actor had greater influence over the attitudes of subjects than did the benefiting actor. A regression analysis in Study 2 supported the mediating role of perceptions and attributions on the relationship between the communicator's outcomes and his influence.

The findings of this research have implications for understanding the development of influence and leadership in a wide range of settings. One factor which may enable politicians to win the confidence of their constituencies is a willingness to suffer for a worthy cause, or perhaps an emphasis on past suffering, real or imagined. Conversely, politicians may lose the support of their constituencies and colleagues if they are perceived to be benefiting from their public positions. In the military, emphasis upon sacrifice and suffering may be an important aspect of the development of the type of loyalty and commitment required of soldiers in combat. Military ceremonies and decorations honoring combat heroes serve to reinforce the feeling of respect and authority accorded to soldiers who have suffered. Similarly, the extreme sacrifice so often seen among religious leaders could be relevant to the success of their movements. The findings reported here suggest that the incidence of suffering and sacrifice among influential people might possibly be more than a coincidence: it may be one basis for their influence.

We have shown that suffering and benefiting affect communicator persuasiveness, and have proposed that these outcomes have their effects through observer perceptions and attributions. Benefiting was shown to result in situational attributions and unfavorable perceptions, while suffering increased dispositional attributions and improved perceptions of the actor. These perceptions and attributions were in turn shown to be related to communicator influence. Eagly and her associates (Eagly & Chaiken, 1975; Eagly, Wood & Chaiken, 1978) have recently extended Kelley's original

attributional analysis of persuasion. Eagly describes three causes to which a communicator's statements may be attributed. First, observers may attribute a communicator's statements to knowledge bias, or a belief that the communicator's knowledge of external reality is inaccurate. Second, observers may attribute the statements to reporting bias, or a belief that the communicator is not willing to convey an accurate version of reality. Third, if both knowledge bias and reporting bias can be eliminated as possible causes for the communicator's statements, observers will attribute the statements to external reality. That is, they will make a veridicality attribution, which will generally increase the level of communicator influence.

We have demonstrated how, all else being equal, a communicator's suffering increases his or her influence, while benefiting decreases influence. In terms of Eagly's analysis, statements made in spite of suffering are not likely to be attributed to reporting bias. With the probability of one bias attribution thus reduced, the likelihood of a veridicality attribution is increased. Conversely, benefiting decreases persuasiveness by increasing the likelihood of a reporting bias attribution. As Eagly points out however (Eagly, Wood & Chaiken, 1978), perceived sincerity may not result in persuasive communication when knowledge bias is also a potential cause for the communicator's statements.

In the current research, it is not likely that knowledge bias attributions affected communicator influence, as there were no cues to indicate differential knowledge across conditions. However, this does not rule out the possibility that communicator suffering and benefiting might have implications for knowledge bias attributions as well as reporting bias attributions in other situations. Research is needed to integrate the issue of communicator outcomes, such as benefiting and suffering, with the attribution issues raised by Eagly. An understanding of the impact of these outcomes for knowledge

bias, reporting bias, and veridicality attributions should help to further clarify their role in determining communicator persuasiveness.

It should be noted that the results of this research are not entirely consistent with other research which has focused upon peoples' positive and negative outcomes. For example, research on the "just world" effect (e.g., Lerner & Simmons, 1966; Walster, 1966; Lerner, 1965; Lerner, Miller & Holmes, 1976), has shown that people tend to devalue the victims of accidents or injustice. Observers have been found to rate such victims as less attractive than non-victims, supposedly so they can maintain a belief that the world is a just place. Of particular interest to the current research are Lerner and Simmons' (1966) findings that a martyr who reluctantly agreed to undergo suffering for the benefit of others was rated as the least attractive of several types of victims.

At least two factors can account for the differences between Lerner and Simmons' (1966) findings and the results reported here. First, the "martyr" in Lerner and Simmons' (1966) study was under pressure from the experimenter to submit to the electric shock which supposedly constituted the suffering. Subjects may have seen this pressure as being responsible for the martyr's suffering. This is in contrast to the current research, in which suffering was the result of Samkanga's conscious decision to express his beliefs, in spite of external pressures. Second, the reason for the subject's agreement to undergo electric shock (i.e., to give other subjects the opportunity to earn course credit) was quite different from the political and/or ideological reasons which the communicator in the current study, and historical leaders such as Jesus, Mao, Hitler, etc., had for suffering. It may be that suffering for this type of ideological cause serves to focus observers' attention on that cause and convince them

of its worthiness, while other causes, such as experimental course credit, are seen by people as being too trivial to justify this type of sacrifice. Subjects in Lerner and Simmons' (1966) study may not have perceived the issue of introductory psychology course credit to be an adequate reason for a person to suffer, thus resulting in the discrediting of the martyr.

Further research on suffering and benefiting is needed to examine the generalizability of the effects demonstrated here. We have suggested possible implications of these findings for the development of influence in various settings. However, aside from our laboratory findings, there is only anecdotal evidence that suffering and benefiting actually play a role in determining a leader's influence. Research which examines the actual suffering or benefiting of influential people, observers' reactions to these people, and the degree of their influence would help identify the extent to which a communicator's outcomes have practical implications for communicator effectiveness.

It should also be noted that suffering and benefiting are complex phenomena, and are usually embedded within other stimuli which could affect the inferences drawn by observers. Research is needed to determine how such stimuli interact with suffering and benefiting to influence communicator effectiveness. Research is also needed to determine the effects of various manifestations of suffering and benefiting. That is, are some types of benefiting more acceptable than others, and do certain types of suffering result in less favorable reactions than those demonstrated here? It may be that any such effects are dependent upon other stimuli present in the observer's environment.

In summary, the results of the two studies reported here suggest that the consequences of an actor's behavior have implications for that actor's

influence over others. Specifically, suffering actors will be perceived in more favorable terms than benefiting actors and will therefore be more influential. These findings are of practical significance to the understanding of leadership processes in a variety of settings. The prevalence of great leaders who have suffered in the areas of politics, religion, and the military have been noted. This research provides an explanation of how this suffering might contribute to their influence. It also raises the possibility that suffering could have implications for leadership and other forms of social influence in other settings. It is obvious that not all sufferers have great influence, and not all people who benefit are mis-trusted. Research is needed to establish the generalizability of the relationships observed here.

References

- Barber, J. D. The presidential character. Englewood Cliffs, N.J.: Prentice-Hall, 1977.
- Burns, J. M. Leadership. New York: Harper & Row, 1978.
- Eagly, A. H. & Chaiken, S. An attribution analysis of the effects of communicator characteristics on opinion change: The case of communicator attractiveness. Journal of Personality and Social Psychology, 1975, 32, 136-144.
- Eagly, A. H. & Himmelfarb, S. Attitudes and opinions. Annual Review of Psychology, 1978, 29, 517-554.
- Eagly, A. H., Wood, W. & Chaiken, S. Causal inferences about communicators and their effect on opinion change. Journal of Personality and Social Psychology, 1978, 36, 424-435.
- Fishbein, M. & Ajzen, I. Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, Mass.: Addison-Wesley, 1973.
- Hovland, C. I. & Weiss, W. The influence of source credibility on communication effectiveness. Public Opinion Quarterly, 1952, 15, 635-650.
- Jaccard, J. Toward theories of persuasion and belief change. Journal of Personality and Social Psychology, in press.
- Kelley, H. H. The process of causal attribution. American Psychologist, 1973, 28, 107-128.
- Kelman, H. C. & Hovland, C. I. Reinstatement of the communicator in delayed measurement of opinion change. Journal of Abnormal and Social Psychology, 1953, 48, 327-335.

- Lerner, M. J. Evaluation of performance as a function of performer's reward and attractiveness. Journal of Personality and Social Psychology, 1965, 1, 355-360.
- Lerner, M. J., Miller, D. T. & Holmes, J. Deserving and the emergence of forms of justice. In L. Berkowitz & E. Walster (Eds.). Advances in experimental social psychology. New York: Academic Press, 1976.
- Lerner, M. J. & Simmons, C. H. Observer's reaction to the "innocent victim." Journal of Personality and Social Psychology, 1966, 4, 203-210.
- Merton, R. K. Mass persuasion: The social psychology of a war bond drive. New York: Harper & Brothers, 1946.
- Walster, E. Assignment of responsibility for an accident. Journal of Personality and Social Psychology, 1966, 3, 73-79.

Table 1

Cell Means for Perceptions, Attributions and Attitudes
Study 1

Variable	Condition			<u>F</u>
	Suffering	Control	Benefiting	
Honesty	5.55	4.93	4.88	7.26*
Independence	5.80	5.22	5.05	9.47*
Bias	3.83	3.45	3.04	7.51*
Attributions	3.34	3.93	3.92	7.88*
Attitudes	4.01	3.83	3.83	2.09

*df = 2, 157, $p < .001$

Note: Higher values indicate more favorable perceptions, situational attributions, and favorable attitudes.

Table 2

Cell Means for Perceptions, Attributions and Attitudes
Study 2

Variable	Condition			<u>F</u>
	Suffering	Control	Benefiting	
Honesty	5.30	5.28	4.77	3.82*
Independence	5.60	5.34	5.10	3.49*
Bias	3.69	3.31	3.35	3.71*
Attributions	3.69	4.07	4.37	5.95**
Attitudes	4.07	3.63	3.37	3.91*

*df = 2, 117, $p < .05$

**df = 2, 117, $p < .01$

Note: Higher values indicate more favorable perceptions, situational attributions, and favorable attitudes.

LIST 1
MANDATORY

Defense Documentation Center (12 copies)
ATTN: DDC-TC
Accessions Division
Cameron Station
Alexandria, VA 22314

Library of Congress
Science and Technology Division
Washington, DC 20540

Chief of Naval Research (3 copies)
Office of Naval Research
Code 452
800 N. Quincy Street
Arlington, VA 22217

Commanding Officer (6 copies)
Naval Research Laboratory
Code 2627
Washington, DC 20375

LIST 2
ONR FIELD

Commanding Officer
ONR Branch Office
1030 E. Green Street
Pasadena, CA 91106

Psychologist
ONR Branch Office
1030 E. Green Street
Pasadena, CA 91106

Commanding Officer
ONR Branch Office
536 S. Clark Street
Chicago, IL 60605

Psychologist
ONR Branch Office
536 S. Clark Street
Chicago, IL 60605

Commanding Officer
ONR Branch Office
Bldg. 114, Section D
666 Summer Street
Boston, MA 02210

Psychologist
ONR Branch Office
Bldg. 114, Section D
666 Summer Street
Boston, MA 02210

Office of Naval Research
Director, Technology Programs
Code 200
800 N. Quincy Street
Arlington, VA 22217

LIST 3
OPTIONAL

Deputy Chief of Naval Operations
(Manpower, Personnel, and Training)
Scientific Advisor to DCNO (Op-OIT)
2705 Arlington Annex
Washington, DC 20350

Deputy Chief of Naval Operations
(Manpower, Personnel, and Training)
Director, Human Resource Management
Division (Op-15)
Department of the Navy
Washington, DC 20350

Deputy Chief of Naval Operations
(Manpower, Personnel, and Training)
Head, Research, Development, and
Studies Branch (Op-102)
1812 Arlington Annex
Washington, DC 20350

Deputy Chief of Naval Operations
(Manpower, Personnel, and Training)
Director, Human Resource Management
Plans and Policy Branch (Op-153)
Department of the Navy
Washington, DC 20350

LIST 3 (cont.)

Chief of Naval Operations
Head, Manpower, Personnel, Training
and Reserves Team (Op-964D)
The Pentagon, 4A578
Washington, DC 20350

Chief of Naval Operations
Assistant, Personnel Logistics
Planning (Op-987P10)
The Pentagon, 5D772
Washington, DC 20350

LIST 4
NAVMAT & NPRDC

NAVMAT

Naval Material Command
Program Administrator, Manpower,
Personnel, and Training
Code 08T244
1044 Crystal Plaza #5
Washington, DC 20360

Naval Material Command
Management Training Center
NMAT 09M32
Jefferson Plaza, Bldg #2, Rm 150
1421 Jefferson Davis Highway
Arlington, VA 20360

NPRDC

Commanding Officer (5 copies)
Naval Personnel R&D Center
San Diego, CA 92152

Navy Personnel R&D Center
Washington Liaison Office
Building 200, 2N
Washington Navy Yard
Washington, DC 20374

LIST 5
BUMED

Commanding Officer
Naval Health Research Center
San Diego, CA

Commanding Officer
Naval Submarine Medical
Research Laboratory
Naval Submarine Base
New London, Box 900
Groton, CT 06340

Director, Medical Service Corps
Bureau of Medicine and Surgery
Code 23
Department of the Navy
Washington, DC 20372

Naval Aerospace Medical
Research Lab
Naval Air Station
Pensacola, FL 32508

CDR Robert Kennedy
Officer in Charge
Naval Aerospace Medical
Research Laboratory Detachment
Box 2940, Michoud Station
New Orleans, LA 70129

National Naval Medical Center
Psychology Department
Bethesda, MD 20014

Commanding Officer
Navy Medical R&D Command
Bethesda, MD 20014

LIST 6
NAVAL POSTGRADUATE SCHOOL

Naval Postgraduate School
ATTN: Dr. Richard S. Elster
Department of Administrative Sciences
Monterey, CA 93940

Superintendent
Naval Postgraduate School
Code 1424
Monterey, CA 93940

Naval Postgraduate School
ATTN: Professor John Senger
Operations Research and
Administrative Science
Monterey, CA 93940

LIST 7
HRM

Officer in Charge
Human Resource Management Detachment
Naval Air Station
Alameda, CA 94591

Commander in Chief
Human Resource Management Division
U.S. Pacific Fleet
Pearl Harbor, HI 96960

Officer in Charge
Human Resource Management Detachment
Naval Submarine Base New London
P.O. Box 81
Groton, CT 06340

Officer in Charge
Human Resource Management Detachment
Naval Base
Charleston, SC 29408

Officer in Charge
Human Resource Management Division
Naval Air Station
Mayport, FL 32228

Commanding Officer
Human Resource Management School
Naval Air Station Memphis
Millington, TN 38054

Commanding Officer
Human Resource Management Center
Pearl Harbor, HI 96860

Human Resource Management School
Naval Air Station Memphis (96)
Millington, TN 38054

Commanding Officer
Human Resource Management Center
1300 Wilson Boulevard
Arlington, VA 22209

Officer in Charge
Human Resource Management Detachment
Naval Air Station Ehdbey Island
Oak Harbor, WA 98278

Commanding Officer
Human Resource Management Center
5621-23 Tidewater Drive
Norfolk, VA 23511

Commanding Officer
Human Resource Management Center
Box 23
FPO New York 09510

Commander in Chief
Human Resource Management Division
U.S. Atlantic Fleet
Norfolk, VA 23511

Commander in Chief
Human Resource Management Division
U.S. Naval Force Europe
FPO New York 09510

LIST 7 (cont.)

Officer in Charge
Human Resource Management Detachment
Box 60
FPO San Francisco 96651

Officer in Charge
Human Resource Management Detachment
COMNAVFORJAPAN
FPO Seattle 98762

LIST 8
NAVY MISCELLANEOUS

Naval Amphibious School
Director, Human Resource
Training Department
Naval Amphibious Base
Little Creek
Norfolk, VA 23521

Chief of Naval Education
and Training (N-5)
ACOS Research and Program
Development
Naval Air Station
Pensacola, FL 32508

Naval Military Personnel Command (2 copies)
HRM Department (NMPC-6)
Washington, DC 20350

Navy Recruiting Command
Head, Research and Analysis Branch
Code 434, Room 8001
801 North Randolph Street
Arlington, VA 22203

Chief of Naval Technical Training
ATTN: Dr. Norman Kerr, Code 0161
NAS Memphis (75)
Millington, TN 38054

Naval Training Analysis
and Evaluation Group
Orlando, FL 32813

Commanding Officer
Naval Training Equipment Center
Orlando, FL 32813

Naval War College
Management Department
Newport, RI 02940

LIST 9
USMC

Commandant of the Marine Corps
Headquarters, U.S. Marine Corps
Code MPI-20
Washington, DC 20380

Headquarters, U.S. Marine Corps
ATTN: Dr. A. L. Slafkosky,
Code RD-1
Washington, DC 20380

LIST 11
OTHER FEDERAL GOVERNMENT

National Institute of Education
Educational Equity Grants Program
1200 19th Street, N.W.
Washington, DC 20208

National Institute of Education
ATTN: Dr. Fritz Muhlhauser
EOLC/SMO
1200 19th Street, N.W.

LIST 11 (cont.)

National Institute of Mental Health
Minority Group Mental Health Program
Room 7 - 102
5600 Fishers Lane
Rockville, MD 20852

Office of Personnel Management
Organizational Psychology Branch
1900 E. Street, NW.
Washington, DC 20415

Chief, Psychological Research Branch
ATTN: Mr. Richard Lanterman
U.S. Coast Guard (G-P-1/2/62)
Washington, DC 20590

Social and Developmental Psychology
Program
National Science Foundation
Washington, DC 20550

LIST 12
ARMY

Army Research Institute
Field Unit - Monterey
P.O. Box 5787
Monterey, CA 93940

Deputy Chief of Staff for
Personnel, Research Office
ATTN: DAPE-PBR
Washington, DC 20310

Headquarters, FORSCOM
ATTN: AFPR-HR
Ft. McPherson, Ga 30330

Army Research Institute
Field Unit - Leavenworth
P. O. Box 3122
Fort Leavenworth, KS 66027

Technical Director (2 copies)
Army Research Institute
5001 Eisenhower Avenue
Alexandria, VA 22333

LIST 13
AIR FORCE

Air University Library/LSE 76-443
Maxwell AFB, AL 36112

AFOSR/NL (Dr. Fregly)
Building 410
Bolling AFB
Washington, DC 20332

Air Force Institute of Technology
AFIT/LSGR (Lt. Col. Umstot)
Wright-Patterson AFB
Dayton, OH 45433

Technical Director
AFHRL/ORS
Brooks AFB
San Antonio, TX 78235

AFMPC/DPMYP
(Research and Measurement Division)
Randolph AFB
Universal City, TX 78148

LIST 15
CURRENT CONTRACTORS

Dr. Clayton P. Alderfer
School of Organization
and Management
Yale University
New Haven, CT 06520

Dr. H. Russell Bernard
Department of Sociology
and Anthropology
West Virginia University
Morgantown, WV 26506

Dr. Arthur Blaiwes
Human Factors Laboratory, Code N-71
Naval Training Equipment Center
Orlando, FL 32813

Dr. Michael Borus
Ohio State University
Columbus, OH 43210

Dr. Larry Cummings
University of Wisconsin-Madison
Graduate School of Business
Center for the Study of
Organizational Performance
1155 Observatory Drive
Madison, WI 53706

Dr. John P. French, Jr.
University of Michigan
Institute for Social Research
P.O. Box 1248
Ann Arbor, MI 48106

Dr. Paul S. Goodman
Graduate School of Industrial
Administration
Carnegie-Mellon University
Pittsburgh, PA 15213

Dr. J. Richard Hackman
School of Organization
and Management
Yale University
56 Hillhouse Avenue
New Haven, CT 06520

Dr. Joseph V. Brady
The Johns Hopkins University
School of Medicine
Division of Behavioral Biology
Baltimore, MD 21205

Mr. Frank Clark
ADTECH/Advanced Technology, Inc.
7923 Jones Branch Drive, Suite 500
McLean, VA 22102

Dr. Stuart W. Cook
University of Colorado
Institute of Behavioral Science
Boulder, CO 80309

Mr. Gerald M. Croan
Westinghouse National Issues
Center
Suite 1111
2341 Jefferson Davis Highway
Arlington, VA 22202

Dr. Asa G. Hilliard, Jr.
The Urban Institute for
Human Services, Inc.
P. O. Box 15068
San Francisco, CA 94115

Dr. Charles L. Hulin
Department of Psychology
University of Illinois
Champaign, IL 61820

Dr. Edna J. Hunter
United States International
University
School of Human Behavior
P.O. Box 26110
San Diego, CA 92126

Dr. Rudi Klauss
Syracuse University
Public Administration Department
Maxwell School
Syracuse, NY 13210

LIST 15 (cont.)

Dr. Judi Komaki
Georgia Institute of Technology
Engineering Experiment Station
Atlanta, GA 30332

Dr. Edward E. Lawler
Battelle Human Affairs
Research Centers
P.O. Box 5395
4000 N.E., 41st Street
Seattle, WA 98105

Dr. Edwin A. Locke
University of Maryland
College of Business and Management
and Department of Psychology
College Park, MD 20742

Dr. Ben Morgan
Performance Assessment
Laboratory
Old Dominion University
Norfolk, VA 23508

Dr. Richard T. Mowday
Graduate School of Management
and Business
University of Oregon
Eugene, OR 97403

Dr. Hoseph Olmstead
Human Resources Research
Organization
300 North Washington Street
Alexandria, VA 22314

Dr. Thomas M. Ostrom
The Ohio State University
Department of Psychology
116E Stadium
404C West 17th Avenue
Columbus, OH 43210

Dr. Arthur Stone
State University of New York
at Stony Brook
Department of Psychology
Stony Brook, NY 11794

Dr. Philip G. Zimbardo
Stanford University
Department of Psychology
Stanford, CA 94305

Dr. George E. Rowland
Temple University, The Merit Center
Ritter Annex, 9th Floor
College of Education
Philadelphia, PA 19122

Dr. Irwin G. Sarason
University of Washington
Department of Psychology
Seattle, WA 98195

Dr. Benjamin Schneider
Michigan State University
East Lansing, MI 48824

Dr. Saul B. Sells
Texas Christian University
Institute of Behavioral Research
Drawer C
Fort Worth, TX 76129

Dr. H. Wallace Sinaiko
Program Director, Manpower Research
and Advisory Services
Smithsonian Institution
801 N. Pitt Street, Suite 120
Alexandria, VA 22314

Dr. Richard Steers
Graduate School of Management
and Business
University of Oregon
Eugene, OR 97403

Dr. James R. Terborg
University of Houston
Department of Psychology
Houston, TX 77004

Drs. P. Thorndyke and M. Weiner
The Rand Corporation
1700 Main Street
Santa Monica, CA 90406

Dr. Howard M. Weiss
Purdue University
Department of Psychological
Sciences
West Lafayette, IN 47907